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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,051	10/16/2003	Avraham Perahia	rio-5	7498
27087	7590	01/12/2006	EXAMINER	
MICHAEL B. EINSCHLAG, ESQ. 25680 FERNHILL DRIVE LOS ALTOS HILLS, CA 94024			RAHMAN, FAHMIDA	
			ART UNIT	PAPER NUMBER
			2116	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,051	<b>Applicant(s)</b> PERAHIA, AVRAHAM	
	<b>Examiner</b> Fahmida Rahman	<b>Art Unit</b> 2116	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-11 are pending.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-4, 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-4 recite limitation "a sleep mode" in line 2. It is unclear whether it is intended to be the same or different from each other or, "a sleep mode" mentioned in lines 7-8 of claim 1. It is necessary to establish a relationship among all recitations of "a sleep mode".

Claims 5-11 depend on claim 2. Thus, they carry the same ambiguity of claim 2.

Claim 11 recites the limitation "a switch" in line 3. It is unclear whether it is intended to be the same or different from "a switch" mentioned in line 3 of claim 11. It is necessary to establish a relationship between the two recitations.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Deschepper et al (US Patent 6199134).

For claim 1, Deschepper et al teach the following limitations:

**Disk drive electronics** (computer system 10 can be thought as a disk drive electronics, since it comprises disk drive and associated circuitry) **that comprises:**

**main electronics** (line 29 of column 13 mentions that there exists Floppy drive, which must have associated main electronics);

**bus interface logic** (lines 43-45 of column 7 mention that the floppy drives are IDE device, which may be connected to IDE bus 98. Thus, the floppy drive has associated bus interface logic);

**a bus interface logic monitor that monitors activity on a host interface** (timer as described in lines 45-47 of column 13, CPU 25, ACPI Power Management Logic 165);

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**and a regulator that supplies power to the bus interface logic monitor, the bus interface logic, and the main electronics** (lines 52-53 of column 7 mention that 10 may be laptop computer. Thus, the system has associated regulator to supply power to bus, CPU and other electronics);

**wherein the bus interface logic monitor determines whether to enter a sleep mode** (line 45-47 of column 13 mentions that power managed devices are powered down when timer shows the period of inactivity), **and if so, causes power from the regulator to be removed from the bus interface logic and the main electronics** (line 28 of column 13 shows that power to floppy drive is removed during reduced power mode. Thus, floppy drive, that has main electronics and associated bus logic, are removed from power supply from regulator during powered down mode).

For claim 2, the system uses ACPI logic. Thus, it has to determine whether to exit a sleep mode, and if so, causes power to be applied to the floppy drive that comprises bus interface logic and the main electronics, since ACPI supports regular working mode.

For claim 3, Lines 45-47 of column 13 mention that the timer is keeping the period of inactivity.

For claim 4, note lines 42-44 of column 14 that describes the access of device by master is done by resetting status bit, which is a part of ACPI logic. Since, ACPI logic

placed the device into low power mode because of prolonged inactivity, this will cause the device out of sleep mode whenever activity presents. Fig 5 shows the device access.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deschepper et al (US Patent 6199134), in view of Flannery (US Patent 5799196).

Deschepper et al do not teach any auxiliary regulator.

Flannery teach that an primary regulator supplies power to main electronics of USB drive (512 and 504 can be considered main electronics of USB drive), while another regulator 518 supplies power to bus interface logic 514 and bus interface logic monitor 516.

It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teachings of Flannery and Deschepper et al. One ordinary skill in

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the art would have been motivated to add a separate supply to the main electronics of the drive, since the drive may need its own supply in some situation, for example, when the drive comprises RAID. The technology of RAID is well known in the art.

For claim 6, the CPU of Deschepper et al puts the devices in power down and power up state. Thus, there exist associated enable signal to activate the device to receive power, as shown in Fig 5.

However, Deschepper et al do not teach two regulators.

Note Fig 5 and Fig 2-3 of Flannery, which show that the main power supply supplies power to 512 in response to resume command from bus interface logic monitor 510.

For claim 7, the CPU of Deschepper et al puts the devices in power down state. Thus, the associated power enable signal must be removed.

However, Deschepper et al do not teach two regulators.

Note lines 5-10 of column 8 of Flannery, which mention that the USB devices are suspended when there is no activity on root hub. The suspend state and resume state are mutually exclusive. Thus, the resume state has to be terminated to enable suspend

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state. Thus, the main regulator removes power from main electronics of USB Drive whenever enable signal is removed.

For claim 8, auxiliary regulator 518 of Flannery removes power from bus interface logic 514 and monitor 516, when suspend is enabled.

For claim 9, auxiliary regulator 518 of Flannery provides power to bus interface logic 514 and monitor 516, when suspend is revoked.

5. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deschepper et al (US Patent 6199134), in view of Flannery (US Patent 5799196), further in view of Schwan et al (US Patent 6125448).

For claims 10 and 11, neither Flannery nor Deschepper et al teach any switch to control auxiliary regulator. Schwan et al teach a system where a switch is used to control power supply (Fig 6a).

It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teachings of Deschepper et al, Flannery and Schwan et al. One ordinary skill in the art would have been motivated to have the switch to control the regulator, since use of switch for over and under voltage protection is well known in the



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art. Thus, In addition to use two supplies, one ordinary skill in the art may prefer to use a switch to control auxiliary supply to protect the system.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fahmida Rahman  
Examiner  
Art Unit 2116

  
**LYNNE H. BROWNE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**